

REMARKS

Claims 15-19 have been amended, claims 1-14, and 29-36 have been cancelled without prejudice or disclaimer, and new claims 41-49 have been added. Claims 15-19, 28 and 41-49 are pending in this application. Applicants reserve the right to file divisional applications based on the cancelled claims.

Claim 15 has been amended so that it stands as an independent claim. Claim 15 has also been amended to include the proviso that if a native nucleic acid comprises the sequence of SEQ ID NO:6 (also referred to as L2 within the application), then the nucleic acid must comprises two or more than two regions having the nucleotide sequence of SEQ ID NO: 6. Support for the amendment that pertains to a nucleotide sequence comprising at least 2 regions of SEQ ID NO:6 may be found on page 32, line 29-30, page 33, lines 11-19, page 33, line 31-page 34, line 6, page 47, lines 17-20, page 57, lines 11-19, and with reference to Figures 6I and 6L (pYE2L2GUS), 7A.2 and 9A (pUCtCUP2-2XL2GUS), 9C (tCUP2 2XL2), 9D (EnhtCUP2+2L2), and 9E and F (tCUP3-2XL2). Support for the amendment of claim 15 relating to the nucleotide sequence exhibiting transcriptional regulatory activity may be found throughout the application, for example with reference to the text and figure noted above and on page 18, lines 11-19, and page 26, line 6-9 and lines 17-21.

Claims 16-18 have been amended to depend from claim 15. Claim 19 has been amended to depend from claim 16. Claims 18, 19 and 28 have been amended to replace the terms "at least one" and "one or more" with the phrase "one or more than one".

New Claim 41, which is similar to claims 18 and 19, has been added and depends from claim 17. New Claim 42 and 43, which is similar to claim 28, have been added and depend from claims 19 and 41, respectively.

New claims 44 and 47 pertain to the nucleotide sequence of SEQ ID NO:6 (L2), and associated constructs. Claims 45 and 46 pertain to a nucleotide sequence consisting of nucleotides 1-16 and 10-24 of SEQ ID NO:6.

New claim 48 is directed to sequences that hybridize to SEQ ID NO:6 under defined hybridization conditions and that exhibits translational activity. Support for the hybridization conditions may be found on page 26, lines 25-26. Also included in this claim is the proviso that if the native nucleic acid comprises the sequence of SEQ ID NO:6, then the nucleic acid comprises two or more than two regions having the nucleotide sequence of SEQ ID NO:6. As indicated above, support for the sequence having at least 2 regions of SEQ ID NO:6 may be found on page 32, line 29-30, page 33, lines 11-19, page 33, line 31-page 34, line 6, page 47, lines 17-20, page 57, lines 11-19, and with reference to Figures 6I and 6L

(pYE2L2GUS), 7A.2 and 9A (pUCtCUP2-2XL2GUS), 9C (tCUP2 2XL2), 9D (EnhtCUP2+2L2), and 9E and F (tCUP3-2XL2). Furthermore, support for the nucleotide sequence exhibiting transcriptional regulatory activity may be found throughout the application, for example with reference to the text and figures noted above and on page 18, lines 11-19, page 26, line 6-9 and lines 17-21.

New claim 49 pertains to constructs comprising the nucleotide sequence of SEQ ID NO:6.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made".

Rejection under 35 USC § 112

Examiner rejected claims 1,2,4-6, 15-19 and 28 under 35 U.S.C. 112, alleging that the use of "open language" with respect to a fragment, analog or derivative thereof allows the claims to read on a genus of sequences that comprise SEQ ID NO: 6.

Applicants have cancelled claims 1, 2 and 4-6 without prejudice or disclaimer and that, as a result, Examiner's objection to these claims is rendered moot.

Claim 15 has been amended to recite a nucleotide comprising SEQ ID NO: 6, with the added proviso that if a native sequence, for example tCUP (also referred to T1275) comprises SEQ ID NO:6, then, there are at least 2 regions that comprise the sequence of SEQ ID NO:6. The present application discloses several constructs comprising oligomers of SEQ ID NO:6 and demonstrates their associated utility in driving gene expression. For example, on page 32, line 29-30, page 33, lines 11-19, page 33, line 31-page 34, line 6, page 47, lines 17-20, page 57, lines 11-19, and with reference to Figures 6I and 6L (pYE2L2GUS), 7A.2 and 9A (pUCtCUP2-2XL2GUS), 9C (tCUP2 2XL2), 9D (EnhtCUP2+2L2), and 9E and F (tCUP3-2XL2), examples are presented that demonstrate increased translational regulatory activity associated with oligomers of SEQ ID NO:6, when compared to the activity associated with a monomer of SEQ ID NO:6.

It is submitted that reference to the nucleotide sequence of SEQ ID NO:6 within claim 15 is definite.

As a result of the above amendments, applicants submit that the subject matter of amended claim 15 complies with 35 U.S.C. 112, and respectfully requests that Examiner remove the objection to this claim. As claims 16-19 and 28 depend on claim 15, applicants respectfully request that the objection to these claims also be removed.

Double Patenting and Rejections under USC § 102

Examiner rejected claims 1, 2, 5, 6, 15-19 and 28 under the judicially created doctrine of obviousness-type double patenting over claims 1-3 of U.S. Patent number 5,824,872 (henceforth Miki). Applicants respectfully disagree for the following reasons.

Claims 1, 2 and 4-6 have been cancelled without prejudice or disclaimer and that, as a result, Examiner's objection to these claims is rendered moot.

Claims 15-19 and 28 have been amended to define the nucleotide sequence of SEQ ID NO:6 explicitly. These claims are directed to nucleotide sequences comprising nucleotides 1-24, 1-16, 10-24, and oligomers, of SEQ ID NO: 6. These sequences represent specific portions of the sequence disclosed by Miki that have now been shown to exhibit translation regulation activity. There is no teaching or suggestion within Miki that the claimed sequences are capable of regulating translation. Furthermore, Miki does not disclose a nucleotide sequence comprising two or more than two regions having the nucleotide sequence of SEQ ID NO: 6, nor does Milki teach that oligomers of SEQ ID NO:6 exhibit increased translational regulatory activity.

It is submitted that by this amendment, claims 15-19 and 28 stand independent of the subject matter disclosed and claimed in US 5,824,872, and removal of this objection is requested.

Rejection under 35 USC § 102

Claims 1, 2, 4-6, 15-19 and 28 are rejected under 35 U.S.C. 102. Applicants respectfully traverse this rejection.

US 5,824,872 (Miki) teaches a constitutive promoter comprising 2255 nucleotides that is capable of directing expression in a number of plant tissues. As Examiner noted, Miki also discloses a vector comprising the promoter linked to a gene, where constitutive expression is desired for the gene. Miki does not disclose or suggest any specific regulatory property associated with nucleotides 1-24, 1-16, 10-24, or oligomers of SEQ ID NO: 6 as defined in the present application.

The claims as amended of the present invention are directed to a nucleotide comprising nucleotides 1-24, 1-16, 10-24, and oligomers of SEQ ID NO: 6, and these sequences represent specific portions of the sequence disclosed by Miki. The present application demonstrates that nucleotides 1-24, 1-16, 10-24, and oligomers of SEQ ID NO: 6 exhibit translation regulation activity. Applicants submit that there is no teaching or

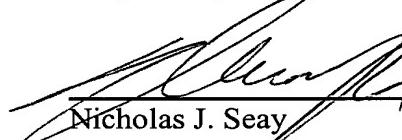
suggestion within Miki that these claimed sequences are capable of regulating translation. Furthermore, Miki does not disclose a nucleotide sequence comprising two or more than two regions having the nucleotide sequence of SEQ ID NO: 6, nor does Milki teach that oligomers of SEQ ID NO:6 exhibit increased translational regulatory activity.

Claim 15 has been amended so that it is directed to a nucleotide sequence comprising SEQ ID NO: 6 provided that if a native sequence, for example tCUP (also referred to T1275) as disclosed in Miki, comprises SEQ ID NO:6, then, there are two or more than two regions that comprise the sequence of SEQ ID NO:6. It is submitted that Miki (US 5,824,872) does not disclose the specific sequence, or oligomers, of SEQ ID NO:6, or the associated utility of the specific sequence, or oligomers, of SEQ ID NO:6.

As a result of the amendments to the claims, and the above arguments, applicants submit that the subject matter of amended claims 15-19 and 28 complies with 35 U.S.C. 102, and removal of the rejection to these claims is respectfully requested.

It is submitted that the above-identified application is now in a condition for allowance and favorable reconsideration and prompt allowance of these claims are respectfully requested. Should the Examiner believe that anything further is desirable in order to place the application in better condition for allowance, the Examiner is invited to contact the applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

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Please cancel claims 1-14, and 29-36 without prejudice or disclaimer.

Please amend claims 15-19 and 28 and add new claims 41-49 as follows:

15. (Amended) [The] An isolated nucleic acid [of claim 1,] comprising the nucleotide sequence of SEQ ID NO: 6, wherein the nucleic acid exhibits translational regulatory activity, provided that, if a native form of the nucleic acid comprises the sequence of SEQ ID NO: 6, then the nucleic acid comprises two, or more than two regions having the nucleotide sequence of SEQ ID NO: 6.

16. (Amended) The isolated nucleic acid of claim [1] 15, comprising nucleotides 1-16 of the nucleotide sequence of SEQ ID NO: 6.

17. (Amended) The isolated nucleic acid of claim [1] 15, comprising nucleotides 10-24 of the nucleotide sequence of SEQ ID NO: 6.

18. (Amended) A construct comprising, [at least] one or more than one isolated nucleic acid as defined by claim [1] 15 in operative association with a gene of interest, and in operative association with one or more than one regulatory elements element required for the expression of the gene of interest within a host organism.

19. (Amended) A construct comprising, [at least] one or more than one isolated nucleic acid as defined in claim [1] 16 in operative association with a gene of interest, and in operative association with one or more than one regulatory [elements] element required for the expression of the gene of interest within a host organism.

28. (Amended) The construct of claim 18, wherein [said] the one or more than one regulatory [elements] element comprises a regulatory element selected from the group consisting of an inducible promoter, developmentally regulated promoter, tissue specific promoter, constitutive promoter, and enhancer element.

41. (New) A construct comprising, one or more than one isolated nucleic acid as defined by claim 17 in operative association with a gene of interest, and in operative with one or more than one regulatory elements required for the expression of the gene of interest within a host organism.

42. (New) The construct of claim 19, wherein said one or more than one regulatory element comprises a regulatory element selected from the group consisting of an inducible promoter, developmentally regulated promoter, tissue specific promoter, constitutive promoter, and enhancer element.

43. (New) The construct of claim 41, wherein said one or more than one regulatory element comprises a regulatory element selected from the group consisting of an inducible promoter, developmentally regulated promoter, tissue specific promoter, constitutive promoter, and enhancer element.

44. (New) An isolated nucleic acid consisting of the nucleotide sequence of SEQ ID NO: 6.

45. (New) An isolated nucleic acid consisting of nucleotides 1-16 of the nucleotide sequence of SEQ ID NO: 6.

46. (New) An isolated nucleic acid consisting of nucleotides 10-24 of the nucleotide sequence of SEQ ID NO: 6.

47. (New) A construct comprising, one or more than one isolated nucleic acid as defined by claim 44 in operative association with a gene of interest, and in operative association with one or more than one regulatory element required for the expression of the gene of interest within a host organism.

48. (New) An isolated nucleic acid comprising the nucleotide sequence of SEQ ID NO: 6, or the isolated nucleic acid comprising a nucleotide sequence that hybridizes to the nucleotide sequence of SEQ ID NO: 6 when hybridized in 4 X SSC at 65°C overnight, followed by washing in 0.1 X SSC at 65°C for an hour, wherein the nucleic acid exhibits translational regulatory activity, provided that, if a native form of the nucleic acid comprises the sequence of SEQ ID NO: 1, then the nucleic acid comprises at least 2 regions having the nucleotide sequence of SEQ ID NO: 6.

49. (New) A construct comprising, one or more than one isolated nucleic acid as defined by claim 48 in operative association with a gene of interest, and in operative association with one or more than one regulatory element required for the expression of the gene of interest within a host organism.

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